

IN THE CLAIMS

Please find below a listing of all of the pending claims. The status of each claim is set forth in parentheses. This listing will replace all prior versions, and listings, of claims in the present application.

1. (Currently Amended) A method for resource allocation management for an interactive session on a grid computing system, comprising:

assigning a user class to an end user;

storing the user class for the end user in a user membership directory;

receiving an end user request for an interactive session with the end user after the user class is assigned to the end user;

in response to receiving the end user request, generating a contract for the interactive session, wherein the contract includes a service level agreement with the end user; and

allocating resources for the interactive session in accordance with the service level agreement;

wherein generating the contract for the interactive session includes:

identifying ~~[[any]]~~ application programs needed by the end user to be launched in said interactive session;

determining ~~[[a]]~~ the user class to which the end user belongs by retrieving the user class from the membership directory;

~~determining resource requirements for said interactive session including processor, network bandwidth, executables and files requirements;~~

consulting one or more user class authorization policy files to determine resource allocation policies for the end user's user class;

for each of the application programs, obtaining from an application profile for the application program, CPU and bandwidth requirements for the application program;

estimating a total CPU and bandwidth requirement for the application programs from the CPU and bandwidth requirements determined for each application program and based on an order of execution of the application programs and the resource allocation policies for the end user's user class;

~~generating [[a]] the contract for the interactive session specifying resource allocations and authorizations, wherein the contract includes a service level agreement with the end user and the resource allocations and authorizations in the contract are determined based on~~ using the end user's class, [[and]] the resource allocation policies for the end user's class, and the estimated total CPU and bandwidth requirement; and

~~allocating resources for the interactive session in accordance with the service level agreement.~~

2. (Previously Presented) The method of claim 1, wherein:

the step of identifying application programs to be launched in the interactive session includes consulting a user directory to identify application programs which the end user is authorized to use.

3. (Currently Amended) The method of claim 1, ~~wherein~~ further comprising:

~~the step of determining resource requirements includes consulting one or more application profile files to determine the application profiles for the application programs which provide information concerning the resource requirements for individual applications.~~

4. (Canceled).

5. (Previously Presented) The method of claim 1, wherein:

the step of generating said contract includes generating an authorization policy.

6. (Previously Presented) The method of claim 1, further comprising:

monitoring the interactive session to ensure compliance with terms of the contract.

7. (Previously Presented) The method of claim 1, wherein:

the step of allocating resources for the interactive session is performed by a grid scheduler which receives the end user request and the contract.

8. (Currently Amended) A system for managing resource allocation for an interactive session on a grid computing system, the system comprising:

one or more processors;

one or more memories coupled to the one or more processors; and

program instructions stored in the one or more memories, the one or more processors for executing the program instructions including:

assigning a user class to an end user;

storing the user class for the end user in a user membership directory;

receiving an end user request for an interactive session with the end user after the user class is assigned to the end user;

in response to receiving the end user request, generating a contract for the interactive session, wherein the contract includes a service level agreement with the end user; and

allocating resources for the interactive session in accordance with the service level agreement;

wherein generating the contract for the interactive session includes:

identifying applications for the end user to be launched in the interactive session;

determining ~~[[a]]~~ the user class to which the end user belongs by retrieving the user class from the membership directory;

~~determining resource requirements for said interactive session including processor, network bandwidth, executables and files requirements;~~

consulting one or more user class authorization policy files to determine resource allocation policies for the end user's user class;

for each of the applications, obtaining from an application profile for the application, CPU and bandwidth requirements for the application program;

estimating a total CPU and bandwidth requirement for the applications from the CPU and bandwidth requirements determined for each application and based on at least one of an order of execution of the applications and the resource allocation policies for the end user's user class;

generating ~~[[a]]~~ the contract for the interactive session ~~specifying resource allocations and authorizations, wherein the contract includes a service level agreement with the end user and the resource allocations and authorizations in the contract are determined based on~~ using the end user's class, ~~[[and]]~~ the resource allocation policies for the end user's class, and the estimated total CPU and bandwidth requirement; and
~~allocating resources for the interactive session in accordance with the service level agreement.~~

9. (Previously Presented) The system of claim 8, further comprising:

a user directory which includes for the end user a list of applications which the end user is authorized to use.

10. (Currently Amended) The system of claim 8, further comprising:

an application profiles repository for providing information concerning the application profiles ~~resource requirements for individual applications.~~

11. (Original) The system of claim 8, further comprising:

a user class authorization policy repository for providing resource allocation policies for different user classes.

12. (Previously Presented) The system of claim 8, further comprising:

a grid scheduler which receives the end user request and the contract and performs the step of allocating resources for the interactive session.

13-14. (Canceled).

15. (Currently Amended) A system for managing resource allocation for an interactive session on a grid computing system, comprising:

a distributed resource management node, the distributed resource management node including a distributed resource management interface and a grid scheduler, the grid scheduler configured to receive an end user request for an interactive session and output an admission control decision;

a contract generation engine coupled to the distributed resource management node, and in response to the distributed resource management node receiving the end user request, the contract generation engine generates a contract for the interactive session, wherein the contract includes a service level agreement with the end user, wherein the contract generation engine generates the contract by performing the following steps:

assigning a user class to an end user;

after the assigning the user class to the end user, the end user request is received;

identifying applications needed by the end user to be launched in said interactive session;

determining the user class to which the end user belongs from the assigned user class;

consulting one or more user class authorization policy files to determine resource allocation policies for the end user's user class;

for each of the applications, obtaining from an application profile for the application, CPU and bandwidth requirements for the application;

estimating a total CPU and bandwidth requirement for the applications from the CPU and bandwidth requirements determined for each application and based on at least one of an order of execution of the applications and the resource allocation policies for the end user's user class; and

generating the contract for the interactive session using the end user's class, the resource allocation policies for the end user's class, and the estimated total CPU and bandwidth requirement

~~configured to determine resource requirements for an interactive session with the end user, to determine a user class to which the end user belongs, to consult one or more user class authorization policy files to determine resource allocation policies for the end user's user class, and to generate a contract specifying resource allocations and authorizations, wherein the contract includes a service level agreement with the end user and the resource allocations and authorizations in the contract are determined based on the end user's class and the resource allocation policies for the end user's class; and~~

a contract repository configured to store the service level agreement.

16. (Previously Presented) The system of claim 15, further comprising:

a user directory which includes for the end user a list of applications which the end user is authorized to use.

17. (Currently Amended) The system of claim 15, further comprising:

an application profiles repository storing the application profiles, ~~for providing the~~
~~resource requirements information for individual applications.~~

18. (Original) The system of claim 15, further comprising:

a user class authorization policy repository for providing resource allocation policies
for different user classes.

19-20. (Canceled).